

Remarks

By this Amendment, independent claims 1 and 5 have been amended to recite a waste paint stream free of compound isocyanate; and dependent claims 11 and 12 have been amended to provide greater clarity. Support for the claim amendments can be found in the original specification with particular reference to page 3 at lines 1-14, in view of a Declaration of Mark Andrew Rowen submitted herewith. No new matter is introduced by the claim amendments.

This application has been carefully reviewed in light of the Office Action dated November 6, 2009, hereinafter "the Office Action." At the time of the Office Action, claims 1-9 and 11-14 were rejected. Applicant respectfully requests reconsideration of the application in view of the claim amendments and the following remarks.

Remarks Directed to Claim Rejections under 35 U.S.C. §112

Claims 1-9 and 11-14 stand rejected under 35 U.S.C. §112 as the Examiner deems the phrase "being free of isocyanate" as lacking support in the original specification. As stated herein, the claims have been amended to recite the waste paint stream being free of compound isocyanate. Applicant's remarks to this §112 rejection are presented below with respect to the claims as currently amended.

Written description for a claim limitation does **not** require a word-for-word support in the original specification. If a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met and the description need **not** be in *ipsis verbis* (in the same words) to be sufficient.¹ Adequate description under the first paragraph of 35 U.S.C. § 112 does **not** require literal support for the

¹ See *Vas-Cath*, 935 F.2d at 1563, 19 USPQ2d at 1116; *Martin v. Johnson*, 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA 1972)

claimed invention and it is sufficient if the originally-filed disclosure would have conveyed to one having ordinary skill in the art that an appellant had possession of the concept of what is claimed.²

In this regard, Applicant respectfully submit the Declaration of Mark Andrew Rowen, the named inventor of the subject application, pursuant to 37 C.F.R. 1.132 and further in view of MPEP 2111.01(III). As stated in paragraph 5 of the Declaration of Mark Andrew Rowen, the claimed invention is directed to a paint residue extracted from a waste paint stream, which illustratively includes a waste paint stream from the automotive refinishing trade/market. See for instance page 3 of the original specification at lines 7-11.

As stated in paragraph 5 of the Declaration of Mark Andrew Rowen, the automotive refinish trade in Australia, and indeed globally, uses the so called "clear over basecoat" system. Pigmented basecoat is applied over suitably prepared surfaces as a one-component coating, over which is applied a two-component clear coating. Low temperature ovens operable at 60-80 degrees Celsius are typically used to cure this system to speed throughput. During and after a refinishing coating project, excess refinish paint compositions from the paint spraying equipments are washed off via wash solvents to prevent clogging and paint color cross-contamination.

As stated in paragraph 6 of the Declaration of Mark Andrew Rowen, in practice, users of this system are encouraged to quarantine the mixed two-component clear coating compositions from the wash solvent stream. Small amounts can be tolerated as they only cause the formation of gel particles which settle out in waste containers and are discarded prior to distillation. The resulting wash solvent diluted stream is the waste paint stream as referenced in the claimed invention.

As stated in paragraph 7 of the Declaration of Mark Andrew Rowen, in the automotive refinishing market, "waste paint stream" is a term of art in that the waste paint stream

² *Ex parte Parks*, 30 USPQ 2d 1234, 1236-37 (B.P. A.I. 1993).

does not get disposed or treated until a time period of for instance ten days to two weeks has elapsed after the solvent washing. Two primary benefits can be obtained through this trade practice. First, disposal of the waste paint stream often involves an additional expense to the automotive refinish business owners; therefore, usually batches of waste paint stream are accumulated for an one-time disposal to minimize related costs. Second, any complementary reactive groups present in the waste paint stream will be fully reacted to each other to form solids which settle out of the waste paint stream. These solids are removed and disposed separately from the waste paint stream again to reduce disposal cost. Therefore, the resulting waste paint stream ready for disposal as a waste is a liquid of a low viscosity and does not contain large amounts of gelled paint as stated in the original specification on page 3 at lines 13-14.

As stated in paragraph 8 of the Declaration of Mark Andrew Rowen, as a result of this trade practice, at the time of being picked up for disposal, the waste paint stream remains a liquid, is devoid of large amount of gelled paints, and ten days to two weeks old. The waste paint stream contains predominantly the one-component coating compositions which have been dissolved in the wash solvent and is free of any isocyanate compounds or compound isocyanate. This is because any free isocyanate groups would have been fully reacted to the hydroxyl groups which are in excess.³ Likewise, any isocyanate compounds containing the isocyanate groups would settle out of the waste paint stream during the waste storage period and would have been removed from the solid/liquid separation before disposal.

For at least the reasons set forth herein above, requisite support for claim amendments in complying the written description requirement is believed to have been provided. Reversal of this rejection and reconsideration of the claims is respectfully requested.

³ Even after being subjected to a high heat distillation treatment, the paint residue derived from the waste paint stream still contains a measurable amount of hydroxyl content such that the paint residue is to be thinned with 25 to 30% by volume of the original wash solvent. See page 3 of the original specification at lines 27-28.

Remarks Directed to Claim Rejections under 35 U.S.C. §102(b)

Claims 1-3 and 11 stand rejected under 35 U.S.C. §102(b) over Hovestadt (U.S. Patent 5,453,460; hereinafter *Hovestadt*). See pages 2-3 of the Office Action. Applicants' remarks directed to this rejection have been presented previously and are not reproduced herein. However, Applicant submits the following additional remarks in view of the instant claim amendments.

The independent claim 1 as amended relates to a paint residue extracted from a paint waste stream free of compound isocyanate.

The Examiner admits that *Hovestadt* is directed to an overspray coating composition that contains compound isocyanate. See pages 2-3 of the Office Action dated November 6, 2009. In particular, *Hovestadt* discloses a process for reusing the overspray by reacting the overspray with externally added isocyanate-reactive-compounds to react out the isocyanate groups such that the storage shelf life of the overspray can be prolonged for later coating applications. See Abstract. The Examiner has admitted this characterization of *Hovestadt* to this effect. See pages 2-3 of the Office Action dated March 10, 2008.

However, as stated on pages 8-9 of the Office Action, the Examiner argues that the *Hovestadt's* overspray as reacted with and modified by the isocyanate-reactive-compounds such as an amine would be free of ***isocyanate groups***. Applicant respectfully submits that *Hovestadt's* amine-modified overspray is ***not*** free of ***compound isocyanate***, even though some of the isocyanate groups on the compound isocyanate may have been blocked by the amine.

Thus, *Hovestadt* fails to teach or suggest the at least aforementioned claim limitation recited in the independent claim 1. The independent claim 1 and all the claims dependent therefrom are submitted to be patentable over *Hovestadt*. Reversal of this rejection to claims 1-3 and 11 is respectfully solicited.

Remarks Directed to Claim Rejections under 35 U.S.C. §103(a)

Applicants' remarks directed to the below-identified claim rejections have been presented previously and are not reproduced herein. However, Applicant submits the following additional remarks in view of the instant claim amendments.

Re: Claim 4

Regarding rejection of claim 4, as stated on page 4 of the Office Action, under 35 U.S.C. §103(a) over *Hovestadt* and Moriarty et al. (U.S. Patent 6,692,670; hereinafter *Moriarty*), claim 4 is submitted to be patentable based on its dependency from claim 1. As set forth above, *Hovestadt* does not teach or suggest the paint residue of claim 1 wherein the paint residue is extracted from a paint waste stream free of compound isocyanate. *Moriarty* does not cure *Hovestadt's* deficiency. Reversal of this rejection to claim 4 is solicited.

Re: Claims 5-9 and 13-14

Regarding rejection of claims 5-9 and 13-14, as stated on pages 5-6 of the Office Action, under 35 U.S.C. §103(a) over *Hovestadt* in view of Patzelt et al. (U.S. Patent 5,766,370; hereinafter *Patzelt*), it is noted that the independent claim 5 as amended recites providing a paint stream free of compound isocyanate. As set forth above, *Hovestadt* does not teach or suggest a paint waste stream free of isocyanate.

Patzelt does not cure *Hovestadt's* deficiency. *Patzelt* uses a solvent recovery temperature sufficient high enough, for instance 100 F above the boiling point of the solvent, to volatilize and recover the solvent. See col. 7, lines 46-66. Applying a heat-assisted treatment such as one of *Patzelt* to the isocyanate-reactive-compounds-modified overspray of *Hovestadt* would frustrate *Hovestadt's* intended purpose of reusing the modified overspray as an active coating composition for at least the reasons set forth below.

First, *Hovestadt* itself discloses that the isocyanate-reactive-compounds such as secondary amines will split off at elevated temperatures and hence reverse the isocyanate groups to their un-blocked state. *See* col. 6, lines 31-35. With the free unblocked isocyanate groups being present, *Hovestadt's* overspray will fully react and form solids at the elevated temperatures during the heat-assisted process of *Patzelt*. The Examiner has admitted to that effect. *See* page 6 of the Office Action dated September 18, 2008. The end product of this process combination is a solidified material that cannot be reused as a coating ingredient contrary to *Hovestadt's* intent. In fact, the resulting solidified material is also contrary to the paint residue being a viscous liquid after the distillation process as recited in the claims.

Second, the overspray of *Hovestadt* containing the isocyanate-reactive-compounds is a complicated mixture with the exact function thereof largely unknown. The active isocyanate groups are not removed but merely masked through the added compounds. In addition, the entire disclosure of *Hovestadt* does not seem to address what would happen if the externally added compounds are supplied in excess and what the potential impact is with relation to the resultant unreacted added compounds. In this regard, *Hovestadt* discloses rather the use of ultrafiltration or low pressure evaporation, as contrary to heat-assisted distillation processes such as one of *Patzelt*, to reconcentrate the modified overspray if needed. *See* col. 6, lines 19-26.

Therefore, the independent claim 5 and all the claims dependent therefrom are submitted to be patentable over *Hovestadt* in view of *Patzelt*. Reversal of this rejection to claims 5-9 and 13-14 is respectfully solicited.

Re: Claim 12

Responsive to rejection of claim 12 under 35 U.S.C. §103(a) over *Hovestadt* as stated on page 7 of the Office Action, notably claim 12 is submitted to be patentable due to its dependency from the independent claim 1, which is now believed to be allowable, for at least the same reasons set forth above. Reversal of this rejection to claim 12 is solicited.

Conclusion

Applicant does not acquiesce in the Examiner's characterizations of the art. For brevity and to advance prosecution, Applicant may not have addressed all characterizations of the art and reserves the right to do so in further prosecution of this or a subsequent application. The absence of an explicit response by Applicant to any of the Examiner's positions does not constitute a concession to the Examiner's positions. The fact that Applicant's comments have focused on particular arguments does not constitute a concession that there are not other arguments for patentability of the claims. Applicant submits that all of the dependent claims are patentable for at least the reasons given with respect to the claims on which they depend.

Claims 1-9 and 11-14 are pending in the applications. Applicant has made a genuine effort to respond to each of the rejections that all formal and substantive requirements for patentability have been met and that this case is condition for allowance, which action is respectfully requested. If a telephone or video conference would help expedite allowance or resolve any additional questions, such a conference is invited at the Examiner's convenience.

Please charge any fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

MARK ANDREW ROWEN

By /Junqi Hang/
Junqi Hang
Reg. No. 54,615
Attorney for Applicant

Date: February 1, 2010

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: 248-358-4400
Fax: 248-358-3351